# OURGENT NON-Potable Water

#### TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

### TEXAS COMMISSION on

P. O. BOX 13087

ENVIRONMENTAL QUALITY (TCEQ)	AUSTIN, TEXAS 78711-3087
Purpose: Close Out/Groundwater Restoration Baseline (Prest) Sample Collected From: Unrestricted Area	Ority (short half-life) Operation) Compliance Restricted/Controlled Area Index No  Contact: M. Abbas Zade Phone/MC: (512) 239-6078 Submitter No. M. 2000070
	Suspected Radionuclides:
Type: Soil Type: Water Sediment Monitor Well Vegetation Baseline Well Wipe Surface Water Other Other	Facility Category: Uranium Recovery Waste Processing Low Level Radioactive Waste/Material Buried Radioactive Waste Mixed Waste Treatment Facility By-Product Waste/Material Other
Radiation Survey Results: BKG: 5-6 UR/hr Sample: BKG Sample Number 3 of 9	Total Analysis TCLP Dissolved Analysis
Sample location Operator / Facility PARS, MW-AA-25 URL, Kings Ville Dome	Detection Limit Requested
Operator / Facility Permit/License No	Arsenicmg/ _
Notes	Barium mg/ Boron mg/
	Cadmium mg/
10 00 0	Calcium mg/
I certify this sample was collected by me at	C
on	Copper mg/
transfer to DSHS Lab	Lead mg/
at     :   4 AM on     /   4 /   4	Magnesium mg/
	Manganese mg/
Signature: m. allangadeh	Mercury mg/ Molybdenum mg/
0	Nickel mg/
I certify this sample was constantly in my custody from the time of	Potassium mg/
receipt listed hereon until transferred to Jodg and	Selenium mg/
at 11: 40 AM on 11-14-14	Silver mg/sodium
	Vanadium mg/
Signature: Auto Valgano	Zinc mg/
Signature: How Vos gavo	-Uranium ma/ mg/
Coordification community and the control of the con	TDS
I certify this sample was constantly in my custody from the time of	Alkalinity mg/
receipt listed hereon until transferred to	Ammonia-N mg/
at : <u>M</u> on	Bicarbonate mg/
	Chlorida Mg/
Signature:	Fluoride mg/
FOR USE BY LABORATORY ONLY	Nitrate-N mg/
	Silica mg/
Laboratory Identification No. AC72075	mg/mg/
Data Received	
11/14/9014 —	mg/
Condition of Seals S MISC INORGANIC	Conductivity
Comments	Specific Conductance   µS/cm  µS/cm
Wet (as received) Weight	pH Std. Un
Dry Weight Ash Weight	
Notes	
I certify this sample was constantly in the laboratory custody from the time of receipt and after the report date listed below until transferred to the TCEQ staff.	Sample Kept on ice from time of collection and during
W. Tarabarana and the same and	transfer to DSHS Lab.
Report Date/Signature	214/14

1100 West 49th St. Austin, Texas 78756

#### Analysis Report, Inorganic Chemistry

(512) 458-7587 Fax (512) 458-7587

DSHS Sample Number: AC72075 Central File Number: Not Provided

Date Sampled: 11/13/2014 Date Laboratory Received: 11/14/2014

Time Sampled: 10:29 Time Received: 11:14

	Analysis	Result	Unit	Method	Date and Time	Analyst	
1	TDS	1610	mg/L	S.M. 2540C	11/14/2014 15:51		BI
2	<sup>A</sup> Total Alkalinity	150	mg/L	S.M. 2320B	11/18/2014	16:17	LJA
3	*Bicarbonate	<2	mg/L	S.M. 2320B	11/18/2014	16:17	LJA
4	*Carbonate	<2	mg/L	S.M. 2320B	11/18/2014	16:17	LJA
5	Chloride	395	mg/L	EPA 300.0	11/18/2014	16:32	LJA
6	Fluoride	0.39	mg/L	EPA 300.0	11/14/2014	19:07	LJA
7	Nitrate - N	< 0.01	mg/L	EPA 353.2	11/14/2014	13:59	BF
8	Sulfate	663	mg/L	EPA 300.0	11/18/2014	16:32	LJA
9	Specific Conductance	3130	μS/cm	S.M. 2510B	11/14/2014	14:30	BI

Comment: The test results on this report relate only to the sample identified on this report.

\* = Calculated

 $^{A}$  = As CaCO<sub>3</sub>

Results reviewed by:

Date reported:

Lorraine Archer

Team Leader, Drinking Water

Report ID: 20141209PWAAC72075

#### **Environmental Sciences Division**

**Quality Assurance Report** 

Sample Number: AC72075

\*Result Calculated

Date Collected: 11/13/2014

ND = Not Detected

Date Received: 11/14/2014 NA = Not Applicable

**Quality Control Results** 

Analyte	Analysis Date	Analytical Method	Blank Results mg/L	Blank Acceptance Limits mg/L	IPC Recovery %	IPC Limits %	Laboratory Matrix Spike Recovery %	Laboratory Matrix Spike Acceptance Limits %	Duplicate RPD %	Duplicate Acceptance Limits %	IPC/QCS Recovery %	IPC/QCS Acceptance Limits
TDS	11/14/2014	S.M. 2540C	<10	±10	100	90-110	104	99-113	5.38	8.57	99.0	90-110
Total Alkalinity	11/18/2014	S.M. 2320B	<2	±2	97.3	80-120	97.7	80-120	0	20	99.2	80-120
*Bicarbonate		S.M. 2320B										
*Carbonate		S.M. 2320B										
Chloride	11/18/2014	EPA 300.0	ND	≤0.05	107	90-110	90	80-120	0	20	107	90-110
Fluoride	11/14/2014	EPA 300.0	ND	≤0.05	102	90-110	103	80-120	11.4	20	102	90-110
Nitrate – N	11/14/2014	EPA 353.2	<0.01	±0,01	106	101-110	104	90-110	1.5	4	108	98-110
Sulfate	11/18/2014	EPA 300.0	ND	≤0.05	104	90-110	101	80-120	0.40	20	104	90-110
Specific Conductance	11/14/2014	S.M. 2510B	<b>⊲</b> I	≤İ	97.3	80-120	99.8	80-120	0.64	20	94.2	80-120

I am the laboratory group leader, or his/her designee, and I am responsible for the release of this data package. I affirm that this data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached deficiency reports. I further affirm to the best of my knowledge that all problems/anomalies observed by this laboratory, or if applicable, any and all subcontracted laboratories, that might affect the quality of the data have been identified in the laboratory review checklist, and no information or data have been withheld that would affect the quality of the data.

Signed:

Printed Name: Lorraine Archer

Report ID: 20141209PWAAC72075

Date: 12/09/2014

Report Date/Signature \_

## NON-Potable Water

#### TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

TEXAS COMMISSION on ENVIRONMENTAL QUALITY (TCEQ)

P. O. BOX 13087

Zivi Morning (OALITT (TCEQ)		AUSTIN, TEXAS 78711-3087
Sample Collected From:    Baseline (Pre-Collected From:   Unrestricted Area   Pre-Pre-Pre-Pre-Pre-Pre-Pre-Pre-Pre-Pre-	rity (short half-life)  Deration) Compliance  Lestricted/Controlled Area	Contact: M. Abbas Zader Phone/MC: (512) 239-6078/
Radiological Analysis Also Performed PCA #	Index No Suspected Radionuclides:	Submitter No. M. 0000070 17
Type: Soil Type: Water Sediment Monitor Well Vegetation Baseline Well Wipe Other Other	Facility Category:  Low Level Radioactiv  Mixed Waste Treatm  Other	ve Waste/Material Buried Radioactive Waste
Radiation Survey Results: BKG: 5-6 UR/hr Sample: BKG Sample Number 6 of 9	Total Analysis	UIRED ANALYSIS BELOW  TCLP Dissolved Analysis  Lested
Sample location Operator / Facility  PAA3, MW-AA-30  URL Kings Ville Dome		
Permit/License No URO 2 32 7	Barium	mg/ mg/
Notes	Boron Cadmium	
	Calcium	mg/ mg/
I certify this sample was collected by me at $\frac{12}{13}$ : $\frac{12}{14}$ on $\frac{11}{13}$ and remained in my custody until	Chromium	mg/
onand remained in my custody until	Copper Iron	mg/
transfer to DSHS Lab	Lead	mg/ mg/
at 14 AM on 14/14	Magnesium Manganese	mg/
Signature: m. allewanth	Mercury	mg/ mg/
orginature.	Molybdenum Nickel	
I certify this sample was constantly in my custody from the time of	Potassium	mg/
receipt listed hereon until transferred to Transferred	Selenium	mg/ mg/
at 11:40 AM on 11-140-14	Silver Sodium	mg/
	Vanadium	mg/
Signature: Ant Valgan	Zinc	mg/ mg/
organical Transfer of the Property of the Prop		mg/
I certify this sample was constantly in my custody from the time of	TDS	mg/
receipt listed hereon until transferred to	Alkalinity Ammonia-N	
at : M_ on	Bicarbonate	mg/
	Carbonate	mg/ mg/
Signature:	Chloride Fluoride	mg/
FOR USE BY LABORATORY ONLY	Nitrate-N	mg/ mg/
	Silica Sulfate	
Laboratory Identification No. AC72078	Sunate	mg/
Date Received 11/14/2014		mg/ mg/
Condition of Seals Si MISC INORGANIC		mg/
Comments	Conductivity	µS/cm
Wet (as received) Weight	Specific Conductance pH	µS/cm
Dry Weight Ash Weight	Pr.	Std. Unit
Notes		
	<b>~</b>	
certify this sample was constantly in the laboratory custody from the time f receipt and after the report date listed below until transferred to the CEQ staff.	Sample Ke	eptonice from time
	Lr.	in and autility
eport Date/SignatureDEC = 9 2014 ***	transfer.	to DSHS Lab

TCEQ Form No. 20528 (Revised 05/05/2014)

ma 10/14/14

1100 West 49th St. Austin, Texas 78756

#### Analysis Report, Inorganic Chemistry

(512) 458-7587 Fax (512) 458-7587

DSHS Sample Number: AC72078 Central File Number: Not Provided

Date Sampled: 11/13/2014 Time Sampled: 12:00 Time Received: 11:14 Date Laboratory Received: 11/14/2014

Analysis		Result	Unit	Method	Date and Time	Analyst	
1	TDS 1810 mg/L S		S.M. 2540C	11/14/2014 15:51		BI	
2	<sup>A</sup> Total Alkalinity	151	mg/L	S.M. 2320B	11/18/2014	16:25	LJA
3	*Bicarbonate	<2	mg/L	S.M. 2320B	11/18/2014	16:25	LJA
4	*Carbonate	<2	mg/L	S.M. 2320B	11/18/2014	16:25	LJA
5	Chloride	418	mg/L	EPA 300.0	11/18/2014	16:44	LJA
6	Fluoride	0.42	mg/L	EPA 300.0	11/14/2014	19:19	LJA
7	Nitrate - N	< 0.01	mg/L	EPA 353.2	11/14/2014	14:00	BF
8	Sulfate	674	mg/L	EPA 300.0	11/18/2014	16:44	LJA
9	Specific Conductance	3150	μS/cm	S.M. 2510B	11/14/2014	14:30	BI

Comment: The test results on this report relate only to the sample identified on this report.

\* = Calculated

 $^{A}$  = As CaCO<sub>3</sub>

Results reviewed by

Lorraine Archer

Team Leader, Drinking Water

DEC - 9 204 mg

Date reported:

Report ID: 20141209PWAAC72078

## **Environmental Sciences Division**

**Quality Assurance Report** 

Sample Number: AC72078

\*Result Calculated

Date Collected: 11/13/2014

ND = Not Detected

Date Received: 11/14/2014 NA = Not Applicable

**Quality Control Results** 

Analyte	Analysis Date	Analytical Method	Blank Results mg/L	Blank Acceptance Limits mg/L	IPC Recovery %	IPC Limits %	Laboratory Matrix Spike Recovery %	Laboratory Matrix Spike Acceptance Limits %	Duplicate RPD %	Duplicate Acceptance Limits %	IPC/QCS Recovery %	IPC/QCS Acceptance Limits %
TDS	11/14/2014	S.M. 2540C	<10	±10	100	90-110	104	99-113	5.38	8.57	99.0	90-110
Total Alkalinity	11/18/2014	S.M. 2320B	<2	±2	97.3	80-120	97.7	80-120	0	20	99.2	80-120
*Bicarbonate		S.M. 2320B								j.		
*Carbonate		S.M. 2320B										
Chloride	11/18/2014	EPA 300.0	ND	≤0.05	107	90-110	90	80-120	0	20	107	90-110
Fluoride	11/14/2014	EPA 300.0	ND	≤0.05	102	90-110	103	80-120	11.4	20	102	90-110
Nitrate – N	11/14/2014	EPA 353.2	<0.01	±0.01	106	101-110	104	90-110	1,5	4	108	98-110
Sulfate	11/18/2014	EPA 300.0	ND	≤0.05	104	90-110	101	80-120	0.40	20	104	90-110
Specific Conductance	11/14/2014	S.M. 2510B	<1	'≤l	96.9	80-120	94.2	80-120	0.64	20	96.2	80-120

I am the laboratory group leader, or his/her designee, and I am responsible for the release of this data package. I affirm that this data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached deficiency reports. I further affirm to the best of my knowledge that all problems/anomalies observed by this laboratory, or if applicable, any and all subcontracted laboratories, that might affect the quality of the data have been identified in the laboratory review checklist, and no information or data have been withheld that would affect the quality of the data.

Printed Name: Lorraine Archer

Report ID: 20141209PWAAC72078

Date: 12/09/2014



## NON-Potable Water

#### TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

TEXAS COMMISSION on ENVIRONMENTAL QUALITY (TCEQ)

P. O. BOX 13087 AUSTIN, TEXAS 78711-3087

ENVIRONMENTAL QUALITY (TCEQ)		AUSTIN, TEXAS 78711-3087
Purpose: Close Out/Groundwater Restoration Baseline (Pre-C	rity (short half-life)  Operation) Compliance  destricted/Controlled Area  Index No	Contact: M. Abbas Zadel Phone/MC: (512) 239-6078/
	Suspected Radionuclides:	Submitter No. MOOOOO 70
Type: Soil Type: Water Sediment Monitor Well Vegetation Wipe Surface Water Other Other	Facility Category:  Low Level Radioactiv  Mixed Waste Treatme	
Radiation Survey Results: BKG: 5-6 UR/hr Sample: BKG: Sample Number 9 of 9 Sample location PAR3, MW = 86	Total Analysis	UIRED ANALYSIS BELOW  TCLP Dissolved Analysis  1ested
Operator / Facility 11RT, Kings 1/11e Dome		mg/
Permit/License No URO 2 42 7	Barium	mg/
Notes	Boron	mg/
	Cadmium Calcium	mg/
I certify this sample was collected by me at 2: 25 PM	Chromium	mg/ mg/
on	Copper	
transfer to DSHS Lab	Iron Lead	mg/
at 11: 111 AM on 11 /11 /11	Magnesium	mg/ mg/
at   :  4 A-M on	Manganese	mg/
Signature: m. all Walleh	Mercury	mg/
Signature. Shi sully	_ Molybdenum Nickel	mg/
I certify this sample was constantly in my custody from the time of	Potassium	mg/ mg/
receipt listed hereon until transferred to of volganic	Selenium —	mg/
at 11:40 AM on 11-14-114	Silver	mg/
11. 11. 011	Sodium Vanadium	mg/
1 1 1	Zinc	mg/ mg/
Signature: Anta Valgano		mg/
	TDS	
I certify this sample was constantly in my custody from the time of	Alkalinity	mg/
receipt listed hereon until transferred to	Ammonia-N	mg/ mg/
at : M_ on	Bicarbonate	mg/
	Carbonate Chloride	mg/
Signature:	Fluoride	mg/ mg/
FOR LICE BY LABORATION ON A	Nitrate-N	mg/
FOR USE BY LABORATORY ONLY	Silica	mg/
Laboratory Identification No. AC72081 A -	Sulfate	mg/
Data Passived		mg/ mg/
11/14/2014 -		
Condition of Seals S. MISC INORGANIC	Conductivity	
Comments	Specific Conductance	μS/cm μS/cm
Wet (as received) Weight	pH	Std. Unit
Dry Weight Ash Weight		
Notes		
	C .1. 11	at an ica Crass
I certify this sample was constantly in the laboratory custody from the time	Jampie Ke	ept on ice from
of receipt and after the report date listed below until transferred to the TCEO staff.	1	eptonice from

DEC - 9 2007 "US"

Report Date/Signature

Sample Kept on ice from time of Collection and during transfer to DSHS 6b ma 1/14/14

1100 West 49th St. Austin, Texas 78756

#### Analysis Report, Inorganic Chemistry

(512) 458-7587 Fax (512) 458-7587

DSHS Sample Number: AC72081 Central File Number: Not Provided

Time Sampled: 14:25 Date Sampled: 11/13/2014 Date Laboratory Received: 11/14/2014 Time Received: 11:14

Analysis		Result	Unit	Method	Date and Time	Analyst	
1	TDS	1160	mg/L	S.M. 2540C	11/14/2014	15:51	BI
2	<sup>A</sup> Total Alkalinity	204	mg/L	S.M. 2320B	11/18/2014	16:33	LJA
3	*Bicarbonate	<2	mg/L	S.M. 2320B	11/18/2014	16:33	LJA
4	*Carbonate	<2	mg/L	S.M. 2320B	11/18/2014	16:33	LJA
5	Chloride	278	mg/L	EPA 300.0	11/21/2014	15:10	LJA
6	Fluoride	0.57	mg/L	EPA 300.0	11/18/2014	13:21	LJA
7	Nitrate - N	2.02	mg/L	EPA 353.2	11/14/2014	14:02	BF
8	Sulfate	341	mg/L	EPA 300.0	11/21/2014	15:10	LJA
9	Specific Conductance	2120	μS/cm	S.M. 2510B	11/14/2014	14:30	BI

Comment: The test results on this report relate only to the sample identified on this report.

\* = Calculated

 $^{A}$  = As CaCO<sub>3</sub>

Results reviewed by: [

Date reported:

Lorraine Archer

Team Leader, Drinking Water

Report ID: 20141209PWAAC72081

## Environmental Sciences Division

**Quality Assurance Report** 

Sample Number: AC72081

\*Result Calculated

Date Collected: 11/13/2014

ND = Not Detected

**Quality Control Results** 

Date Received: 11/14/2014

NA = Not Applicable

Quality Control Results												
Analyte	Analysis Date	Analytical Method	Blank Results mg/L	Blank Acceptance Limits mg/L	IPC Recovery %	IPC Limits %	Laboratory Matrix Spike Recovery %	Laboratory Matrix Spike Acceptance Limits %	Duplicate RPD %	Duplicate Acceptance Limits %	IPC/QCS Recovery %	IPC/QCS Acceptance Limits %
TDS	11/14/2014	S.M. 2540C	<10	±10	100	90-110	104	99-113	5.38	8.57	99.0	90-110
Total Alkalinity	11/18/2014	S.M. 2320B	<2	±2	97.3	80-120	97.7	80-120	0	20	99.2	80-120
*Bicarbonate		S.M. 2320B										
*Carbonate		S.M. 2320B	399									
Chloride	11/21/2014	EPA 300.0	ND	≤0.05	107	90-110	103	80-120	0.24	20	107	90-110
Fluoride	11/18/2014	EPA 300.0	ND	≤0.05	101	90-110	100	80-120	5.26	20	102	90-110
Nitrate – N	11/14/2014	EPA 353.2	<0.01	±0.01	106	101-110	104	90-110	1.5	4	108	98-110
Sulfate	11/21/2014	EPA 300.0	ND	≤0.05	104	90-110	107	80-120	0	-20	104	90-110
pecific Conductance	11/14/2014	S.M. 2510B	<1	≤l	96.9	80-120	94.2	80-120	0.64	20	96.2	80-120

I am the laboratory group leader, or his/her designee, and I am responsible for the release of this data package. I affirm that this data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached deficiency reports. I further affirm to the best of my knowledge that all problems/anomalies observed by this laboratory, or if applicable, any and all subcontracted laboratories, that might affect the quality of the data have been identified in the laboratory review checklist, and no information or data have been withheld that would affect the quality of the data.

Signed:

Printed Name: Lorraine Archer

Report ID: 20141209PWAAC72081

Date: 12/09/2014